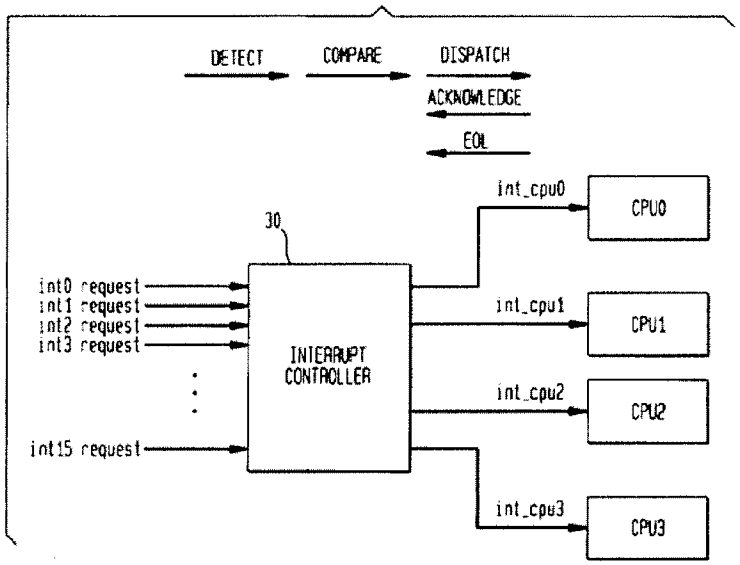
REMARKS

SECTION 102 REJECTION OF CLAIM 1

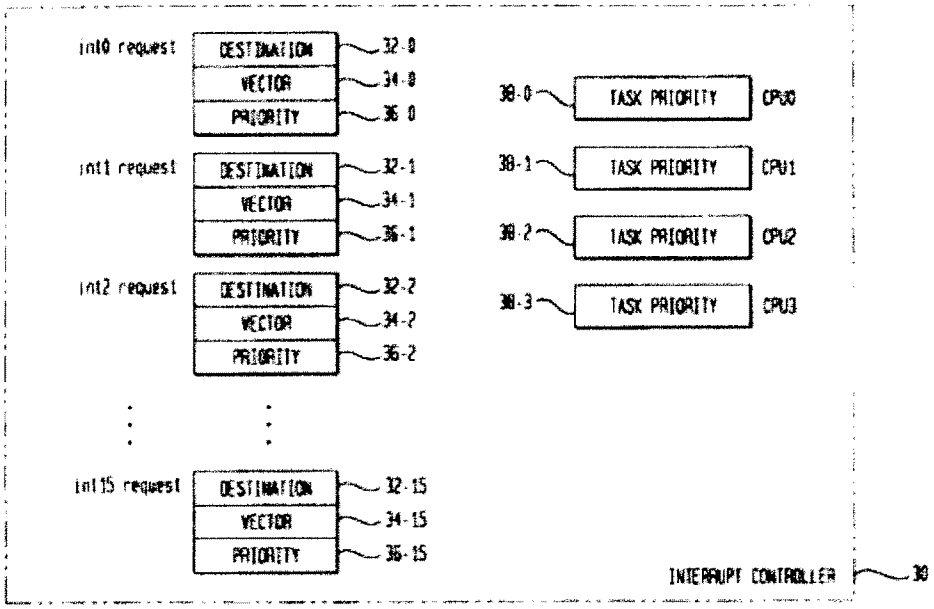
Chou discloses a multiprocessor system that includes an interrupt controller **30**, as shown in FIG. 3 below:

FIG. 3



The interrupt controller **30** receives interrupt requests (**int0-int15**) from peripheral devices, such as keyboards, pointer devices, and disk drives. It then prioritizes these, and sends the important ones along to selected processors **CPU0-CPU3**. According to FIG. 4 below, it takes three registers to store an interrupt request: a vector register **34-0**, a destination register **32-0**, and a priority register **36-0**.

FIG. 4



As best understood, the Examiner regards each interrupt request as being a "message." Following this line of reasoning, the Examiner presumably regards claim 1's "new-message slot" as the union of three registers **32-*n***, **34-*n***, **36-*n*** shown in FIG. 4. The "message list" would then be the set of all such "message slots," of which sixteen are shown in FIG. 4. Claim 1's limitation of "modifying said new-message slot to specify an intended recipient of said message" would then correspond to changing the contents of a destination register **32-*n***.

A flaw in the Examiner's position is that the putative "message list" is *not accessible* to the CPUs. As a result, there is no "message list accessible to a plurality of processors" as required by claim 1.

For example, FIG. 3 shows four CPUs. But each CPU is only connected to a corresponding **int_cpu** line, as shown in both FIG. 3 and FIG. 5. The **int_cpu** lines are on the other side of an "interrupt selection and routing process circuit" **40**. Thus, there is no plausible way for the CPUs (CPU0-CPU4) in FIG. 3 to access the registers shown inside the interrupt controller **30** in FIG. 4.

Applicant amends the claim to recite the foregoing limitation explicitly in the body of the claim, as well as in the claim preamble.

Applicant further amends the claim to recite the step of receiving a message from one of the plurality of processors. To the extent *Chou*'s interrupt requests can be regarded as "messages" within the meaning of claim 1, it is apparent that they come from peripheral devices, and not processors.

SECTION 101 REJECTION OF CLAIM 1

Applicant amends the claim to "tie" the method to some particular machine. In particular, the claim now recites "a method for using a computer to assist a particular data storage machine in posting a message on a message list." The preamble is similar to that used in the claim of *Diamond v. Diehr* which the Supreme Court deemed to comply with section 101.

SECTION 102 REJECTION OF CLAIM 7

Claim 7 recites the additional limitation of updating a message directory to indicate the presence of a new-message slot in the message list, with the message directory also being accessible to the plurality of processors. The Examiner asserts that this limitation is disclosed between col. 4 line 66 and col. 5, line 20.

The cited text describes, in connection with FIG. 4, internal registers within an interrupt controller. The Examiner has not identified anything in FIG. 4 or the accompanying text as being a "message directory" that is "accessible to said plurality of processors."

A section 102 rejection requires that for each limitation in the claim, the Examiner identify a corresponding structure in the cited reference. The Examiner has not identified any particular structure in FIG. 4 or in the cited text that corresponds to a "message directory" that is "accessible to said plurality of processors." Accordingly, the section 102 rejection is improper and should be withdrawn.

SECTION 103 REJECTIONS

The remaining claims stand rejected as being rendered obvious by the combination of *Chou and Xie.* [1]

Each section 103 rejection made in the Office Action relies on the same three passages of *Xie*: namely col. 8, lines 64-67, col. 11, lines 7-9 and col. 11, lines 55-60. These passages have in common the occurrence of the words "pointer," "mask," and "list" in close proximity to each other. These words also appear in the rejected claims. However, as will be apparent below, the fact that a reference and a claim have words in common does not mean that the reference discloses the claimed subject matter.

For convenience, the three passages upon which the Office relies are pasted below and identified as passages A, B, and C.

Passage A, which is at *Xie* col. 8, lines 62-67 reads as follows:

> A message mask therefore operates as a sort of circular queue to reflect the status of the last messages sent or received by a node. One or more pointers or references to mask positions may be maintained to identify which bit is to be associated with the next or current message and/or which is the oldest, valid bit in the mask.[2]

Passage B, which is at *Xie* col. 11, lines 5-9 reads as follows:

> In state **220**, the sequence number of the unsuccessful message is noted in order to prevent the originating object handler from reusing it. The sequence number may, for example, be stored in a list, a hash table or other data structure.[3]

Passage C, which is at *Xie* col. 11, lines 55-60 reads as follows:

> Illustratively, one or more pointers and/or other data structures may be associated with the message mask. Pointers may, for example, identify the mask entry associated with the most recently used sequence number,

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[1] *Xie* et al., U.S. Patent No. 6,662,213.
[2] *Xie*, col. 8, lines 62-67.
[3] *Xie*, col. 11, lines 5-9.

> the next sequence number to be used, or the oldest sequence number associated with the message mask.[4]

SECTION 103 REJECTION OF CLAIM 2

Claim 2 recites the additional limitation of inserting a new-message slot into a message list that includes a first existing message slot having a pointer to a second existing message slot.

Passage A fails to teach message list accessible to plurality of processors

The Office Action suggests that *Xie* discloses the foregoing limitation in passage A.

According to passage A, each node maintains a message mask to keep track of the status of messages it has sent to other nodes.

In passage A, the Office appears to be mapping *Xie*'s message mask to claim 2's "message list". But *Xie*'s mask is not "accessible to a plurality of processors" as required by the claim. *Xie*'s message mask is accessible only to the particular node that maintains it. Therefore, *Xie*'s mask cannot be regarded as claim 2's "message list."

Moreover, *Xie*'s message mask is not even made of message slots. According to the Office's position in claim 1, a message slot is a time interval during which a message is sent. *Xie*'s message mask is obviously not made of time intervals. It is made of bits that track the status of messages sent by a particular node to other nodes.

Claim 2 also requires that the message list include a message slot having a pointer.

The "pointers" referred to in passage A are pointers that are outside the message mask. These pointers point into the message mask to identify bits associated with particular messages, such as the oldest message or the current message. They are not pointers from one element of the message mask (i.e. a first existing-message slot) to other elements of the message mask (i.e. a second existing message slot).

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[4] *Xie*, col. 11, lines 55-60.

Accordingly, passage A fails to support the proposition that *Xie*'s message mask could correspond to claim 2's message list.

Passage B fails to teach message list accessible to plurality of processors

Next, the Office Action states that the additional limitation of claim 2 can be found in passage B.

In passage B, the Office appears to regard the "list, hash table, or other data structure" in which a sequence number is stored as being claim 2's "message list."

But the "list, hash table or other data structure" is not accessible to a plurality of processors. It is only accessible to the particular processor in which it resides. Moreover, there is nothing that suggests that the "list, hash table or other data structure" has message slots that include pointers to other message slots. In fact, according to the Office's position in claim 1, message slots are time intervals. It would be physically impossible for any data structure to "contain" time intervals. In fact, it is conceptually difficult to understand what it would even mean for a data structure to contain a time interval. Accordingly, it too cannot meet the claim limitation.

Passage C fails to teach message list

Finally, the Office Action suggests that claim 2's additional limitation is disclosed in passage C.

Passage C refers to certain data structures used by an object handler. The Office appears to regard these data structures as being claim 2's message lists. But none of these data structures are accessible to a plurality of processors as required by the claim. Moreover, there is no indication that the data structures used by an object handler have message slots that include pointers to other message slots.

Moreover, according to the Office's position in claim 1, a message slot is a time interval. It is conceptually unclear what it would mean for an interval of time to "contain" a pointer.

Summary

The Office Action has nominated three structures in *Xie* as allegedly corresponding to claim 2's message list. But none of these structures are accessible to a plurality of processors. Nor are any of these structures made up of a message list that includes message slots that have pointers to other message slots. None of these structures can possibly correspond to a "message list."

Thus even if one were to somehow combine *Peterson* and *Xie*, the result would still fail to meet the claim limitation.

Motivation to combine is flawed

The Office Action suggests that one of ordinary skill in the art would have found it obvious to "implement or incorporate *Xie*'s pointer in *Chou*'s method in order to identify the next or current message."

The proposed motivation to combine the references makes no sense. One of ordinary skill in the art would have recognized that there is no "next or current message" in *Chou*. The interrupt requests in Chou can arrive at different times. But there is no indication that Chou's system pays attention to when they arrive. Instead, Chou's system uses certain priorities in connection with ordering the processing of interrupt requests.

One of ordinary skill in the art would have regarded the Office's proposed modification of *Chou* to "identify next and current messages" as being a gratuitous modification with no apparent technical purpose. The only plausible reason for so modifying *Chou* appears to be that of trying to reconstruct the claims, not the claimed invention, by piecing together enough references that happen to use the same English words and phrases that comprise the claims.

Applicant notes that patent protection is sought for an invention, not for the particular words used in the claims. The Office's attempt to search the prior art for particular words and phrases used in the claims confuses the words used to set forth the metes and bounds of the invention with the invention itself.

SECTION 103 REJECTION OF CLAIM 5

Claim 5 recites the additional limitation of "modifying a destination mask associated with said new-message slot, said destination mask including information specifying all intended recipients of said message."

The Office states that the additional limitation of claim 5 is disclosed by the same three passages A, B, and C that allegedly disclosed the additional limitation of claim 2.

In passage A, the Office appears to regard the message mask as corresponding to the claimed "destination mask."

It is quite plain that a destination mask and a message mask are two different things. A message mask is associated with messages and a destination mask is associated with destinations. Destinations and messages are clearly not the same thing.

The Examiner appears to rely on the idea that since both destination masks and message masks are masks, they must mean the same thing. However, it is well established that disclosure of one species of a genus does not disclose all species of a genus. Accordingly, even if one were to combine the references, the result would still fail to yield the claimed invention.

Passage B, which is also cited as teaching the claim limitation, does not refer to masks at all. Hence it is difficult to see how it could possibly disclose claim 5's destination mask.

Passage C refers again to a message mask. This is different from a destination mask for reasons discussed in connection with passage A.

SECTION 103 REJECTION OF CLAIM 6

Claim 6 includes the additional limitation of modifying a data element that corresponds to a selected processor to indicate that that selected processor is an intended recipient of a message.

The Office states that this claim limitation is disclosed by the same three passages that allegedly disclose the limitations of claim 2.

Paragraphs A and C refer to a message mask that is maintained by a particular processor. As discussed in *Xie*, paragraph 8, lines 45-47, a processor maintains a plurality of message masks, each of which corresponds to an intended recipient of a message sent by that processor. Accordingly, there is nothing that could possibly be modified to indicate an intended recipient. For example, modifying a data element, such as a bit, in a message mask does not specify an intended recipient because the entire mask is already assigned to an intended recipient. This intended recipient does not change as a result of any modification of data elements contained in the message mask.

Paragraph B refers to modifying a memory location to note a sequence number of an unsuccessful message. But this modification does nothing to specify that a "selected processor is an intended recipient." Instead, the modification indicates a failed attempt to send a message.

It is apparent therefore that *Xie* fails to disclose the additional subject matter of claim 6.

SECTION 103 REJECTION OF CLAIM 8

Claim 8 recites the additional limitation of "updating an attention mask containing information indicative of which processors from said plurality of processors are intended recipients of messages contained in said message list."

The Office cites the same three passages A, B, and C as allegedly disclosing the foregoing claim limitation.

Paragraphs A and C refer only to message masks. Claim 8 refers to an attention mask. A message mask is plainly not an attention mask. Accordingly, paragraphs A and C fail to disclose "updating an attention mask" as required by claim 8.

Paragraph B does not refer to masks at all, and is therefore irrelevant to the additional limitation of claim 8.

SUMMARY

Now pending in this application are claims 1-9, of which claim 1 is independent.

Applicant encloses a petition for extension of time and authorization to charge our deposit account with an appropriate fee.

No additional fees are believed to be due in connection with the filing of this response. However, to the extent fees are due, or if a refund is forthcoming, please adjust our deposit account 06-1050, referencing Attorney Docket No. 07072-0127001.

Respectfully submitted,

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